idea of neuralgia existing as a disease in itself, and revealing it as a symptom referable to different origins. He divides those manifestations commonly called facial neuralgia into two classes: (1) Those in which the injection of cocaine temporarily stopped the pain, from which he inferred that the cause was situated in the nerve endings, and (2) those in which the injection only brought on the neuralgic crisis, demonstrating that the exciting cause is situated further up. Those of the first group are certainly neuralgias of peripheral cause, while those of the second may be of funicular or central origin. Under these two classifications he records a series of eighteen observations, with detailed conclusions drawn from each, laying stress on the advantages in diagnosis offered by the use of the cocaine injections. He also gives the history of three additional cases where the neuralgic symptoms entirely subsided after the cocaine injections *in loco dolenti.* He also details a final case where the cocaine injections caused remission, but not entire subsidence of the symptoms. Throughout the article he emphasizes the advisability of medical treatment before resorting to surgical interference, and arrives at the following conclusions: In a case of neuralgia in default of etiological diagnosis, which is often impossible, diagnosis should be made at the seat of pain. (2) This diagnosis can usually be made by clinical evidence, but it should always be confirmed by the proof of cocaine injection. (3) *A fortiori* this proof is indispensable in all doubtful cases. JELLIFFE.

MULTIPLE NEURITIS. A Case Resulting Probably from Morphine Toxemia. By Frank Halleck Stephenson (N. Y. Medical Journal, April 16, 1904).

Electrical tests in multiple neuritis give all possible changes from the normal. The muscles supplied by the affected nerves in multiple neuritis undergo changes only in less degree than those in simple neuritis and degenerative nervous diseases. The escape of numerous fluids in the nerve trunk is probably to be correlated with the persistence of numerous apparently normal fibers in the atrophied muscles, and the paralysis is, therefore, seldom complete. The diagnosis rests on the motor and sensory symptoms, their symmetrical distribution, their predominence in the extremities, the marked affection of the extensors, the modification of the reflexes, the marked tenderness of nerve trunks and muscles, and the history or presence of some toxic agent capable of producing the neuritis. In multiple neuritis we do not get the girdle pains, gastric and intestinal crises, the Argyll-Robertson pupil, the ulcers, joint lesions, arthropathies, optic atrophy, and very seldom the vesical troubles observed in locomotor ataxia. The peculiarity of gait is due more to paresis than to incoordination. The development of multiple neuritis is much more rapid than tabes.

TUMORS INVOLVING THE CAUDA EQUINA. George Gilbert Davis (Journ. A. M. A., March 19, 1904).

The following symptoms are regarded as typical of a lesion of the cauda equina. The patient first experiences pain on movement of the lower extremities; then the pain becomes spontaneous and persistent, with exacerbations. Later anesthesia begins. Symptoms of disturbance of the functions of the bladder and rectum may appear early, and are usually present before anesthesia becomes permanent. Muscular weakness is present in proportion to the pressure on the motor fibers, and as a rule does not appear until pain has become pronounced. The paralysis is characterized by loss of muscular tone; an early examination may show exaggerated reflexes; later they are diminished and lost. Atrophies of the muscle develop and electrical reactions may be altered; decubitus has been noticed. The involvement of one extremity more than the other, as in Fraenkel's case; the slow development of motor paralysis of sensory disturbances and of other symptoms and the destruction of reflexes and other symptoms, and the destruction of reflexes before loss of power are other important symptoms. In disease of the conus medullaris symptoms develop more rapidly; the various sensory disturbances may not be alike, pain and temperature sensations are more frequently affected than tactile sense. Severe pain is absent. Decubitus is more frequent. Tumors having their origin within the cauda are not numerous. The writer has collected from literature a glioma, five sarcomas, five neurofibromas, one endothelioma, six of which tumors were removed with fair results. Cases in which the growth springs from the meninges are less common and the variety of the tumors is small. Sarcomas are most frequent, endotheliomas are less frequent, and rarely fibromas, lipomas and secondary carcinomas are found. The greater number of tumors of this region are extra dural. Typical symptoms are produced by growth and pressure on the dura and cauda, and in case the tumor is malignant infiltration of the dura occurs later. NOYES.

TYPHOID MYELITIS. J. Lépine, (Revue de Médicine, Vol. 23, 1903, p. 930).

The author gives a description of the history of a patient 19 years of age suffering from typhoid, in whom the following unusual nervous symptoms developed: Increased sensibility to touch and to the point of a pin, especially affecting the lower extremities and the abdomen up to the level of the umbilicus. Tendon reflexes of the lower extremities increased most markedly on the right side. Babinski's reflex. General diminution of muscular power in the limbs, most marked in the lower. Voluntary movements, however, possible, slow and with slight incoördination. Gradually complete flaccid paraplegia developed, the cutaneous and tendon reflexes on both sides disappeared, marked diminution to every form of sensibility and incontinence of urine and feces supervened, and, despite the greatest care, bed sores formed. Post-mortem examination showed the presence of an acute anterior poliomyelitis, attaining its maximum development in the lumbo-sacral region, with central myelitis, extension of the lesion into the white columns (antero-lateral), and concomitant leptomeningitis. Other parts of the central nervous system showed only slight changes, there being very moderate implication of the motor roots and relative integrity of the sensory paths. Previous accounts of paralysis in association with typhoid fever are considered, and the author concludes that a neuritis or a myelitis may be a post-typhoidal condition. All degrees of acute inflammation may occur, the lesions being without doubt primarily vascular, with subsequent involvement of the cells, interstitial inflammation and degeneration, with a tendency to an upward propagation, thus assuming the type of acute ascending paralysis. Apparently the typhoid toxin is sufficient for the production of the lesion, the presence of the bacillus not being indispensable. Dr. Lépine obtained negative results on bacterial examination. JELLIFFE.